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Calendar No. 711

101ST CONGRESS *2d Session*	SENATE	REPORT 101-388

FASTENER QUALITY ACT

Mr. HOLLINGS, from the Committee on Commerce, Science, and Transportation, submitted the following

REPORT

OF THE

SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ON

H.R. 3000

JULY 23 (legislative day, JULY 10), 1990.—Ordered to be printed

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101ST CONGRESS
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101-388

FASTENER QUALITY ACT

JULY 23 (legislative day, JULY 10), 1990.—Ordered to be printed

Mr. HOLLINGS, from the Committee on Commerce, Science, and Transportation, submitted the following

REPORT

[To accompany H.R. 3000]

The Committee on Commerce, Science, and Transportation, to which was referred the act (H.R. 3000) to require that certain fasteners sold in commerce conform to the specifications to which they are represented to be manufactured, to provide for accreditation of laboratories engaged in fastener testing, to require inspection, testing, and certification, in accordance with standardized methods, of fasteners used in critical applications to increase fastener quality and reduce the danger of fastener failure, and for other purposes, having considered the same, reports favorably thereon with an amendment in the nature of a substitute and recommends that the act as amended do pass.

PURPOSE OF THE BILL

The purpose of the bill as reported is to establish procedures to provide customers who buy certain high-strength bolts, screws, and other fasteners used in critical applications with greater assurance that the fasteners they purchase meet stated specifications and do not include substandard or counterfeit items. The bill requires that these fasteners be tested by accredited laboratories; directs the Secretary of Commerce (Secretary), acting through the Director of the National Institute of Standards and Technology (NIST), to establish procedures for accrediting laboratories; requires those persons who sell these fasteners to follow certain product identification procedures; and establishes civil remedies, civil penalties, and criminal penalties.

39-010

BACKGROUND AND NEEDS

Every year approximately 200 billion bolts, screws, and other fasteners are sold in the United States. Of these, approximately one percent are special high-strength fasteners which carry "grade marks"—special markings to indicate that they conform with particular fastener specifications set by voluntary standards organizations.

These grade-marked fasteners are designed for, and used in, critical applications where the failure of a fastener could jeopardize public safety. Examples of critical applications include aircraft, the space shuttle, motor vehicles of all kinds, military equipment, highway bridges, and buildings.

THE THREAT TO PUBLIC SAFETY

Despite the fact that these grade-marked fasteners are used in applications involving public safety, there has been increasing evidence in recent years which shows that far too many substandard and counterfeit fasteners are being sold and used in the United States. Outright fraud is often the cause. Some unethical companies will sell low-strength bolts which are made to look like genuine high-strength fasteners. They sell the substandard fasteners because these products are cheaper to produce, making the resulting profit margin larger when they are sold to unsuspecting customers. Other companies have falsified laboratory testing reports.

The substitution of bogus bolts has led to serious accidents and costly repairs for both government agencies and the private sector. An 18-month investigation by the Subcommittee on Oversight and Investigations of the House Committee on Energy and Commerce found that "the failure of substandard and often counterfeit fasteners has killed people, reduced our defense readiness, and cost both the American taxpayer and the American industry untold millions in breakdowns, downtime, reconstruction, and other unnecessary inefficiencis."

The report, entitled "The Threat from Substandard Fasteners: Is America Losing Its Grip?" (Committee Print 100–Y, July 1988), documented the following problems, among others.

—During the 1980s, over 30 million counterfeit fasteners fraudulently designated grade 8.0 were found in inventories of the Defense Industrial Supply Center (DISC) and will be disposed of at great cost to the taxpayers.

—Widespread counterfeiting and failures of high-strength fasteners have been reported in building and construction sites, coal mines, helicopters, highway bridges and guard rails, nuclear and fossil fuel power plants, military vehicles and weapons, grain storage sites, and commercial trucks and buses.

—Bad fasteners have been found in space shuttle equipment, and six of the shuttle's fastener vendors have been discovered to have inadequate quality control systems.

—Peterbilt Trucks narrowly averted disaster by a quick recall when substandard foreign fasteners were found to cause failures in the steering mechanisms of some of its trucks.

—The National Transportation Safety Board (NSTB) reports that 61 aviation accidents during a three-year period in the 1980s

involved fastener failures. Several deaths resulted. At least some of the problems relate to material failure.

—On December 22, 1987, Calvin Davis, an iron worker employed to help build the Saturn automobile factory in Maury County, TN, suffered a fatal fall from a girder when an apparently substandard bolt snapped while he was tightening it.

In addition to the problems cited in the July 1988 House report, other problems also have been documented. They include the following.

—According the "Los Angeles Times" (January 27, 1989), U.S. Postal Service officials found that 20,000 of the nuts and bolts in a new headquarters building under construction in Los Angeles were counterfeit. The Postal Service ordered them removed, but on October 1, 1987, the moderate Whittier earthquake struck. Five of the buildings concrete walls collapsed. No one was injured, but had the quake occurred just a few hours later, 400 construction workers would have been on the site.

—According to a news report from WMAQ-TV, Channel 5, in Chicago, Illinois, on December 5, 1987, an engine fell off a U.S. Air 737 airliner during takeoff from Philadelphia. Bad bolts were the cause. According to the same report, on January 20, 1989, an engine fell off a Piedmont Airlines 737 airliner during takeoff. Again, faulty fasteners were cited as the cause. Fortunately, no injuries were reported in either case.

—The U.S. Attorney in Wyoming is now investigating the alleged use of bogus bolts in the silos and communications system for the MX strategic missile.

FEDERAL INVESTIGATIONS

Investigations and audits by Federal agencies also have shown that the problem of substandard fasteners is widespread. Some of these investigations and audits have led to criminal indictments and convictions.

In recent years, the U.S. Customs Service (Customs) and other agencies have stepped up their investigations of fraud in the importation and sale of fasteners. For example, on June 28, 1989, Customs and the Defense Criminal Investigation Service (DCIS) executed search warrants in four States against 11 distributors and importers of fasteners alleged to be counterfeit and mismarked. The agents seized 87 tons of bolts. Customs executed other search warrants in April 1989, March 1990, and June 1990.

In addition, audits by the inspectors general at the National Aeronautics and Space Administration (NASA) and the Department of Defense (DOD) have uncovered problems with highstrength fasteners bought by both agencies. In testimony before the Committee at its November 20, 1989 hearing on H.R. 3000, Mr. Bill Colvin, NASA's Inspector General, described the audit his office undertook:

> The first major disclosure in the audit was that fastener certifications were unsupported by test results * * *. This lack of adequate controls necessary to assure product compliance with applicable part standards and specifications

> resulted in the installation of untested or undertested fasteners in flight hardware * * *.

NASA spent $11 million to remove suspect bolts from the agency's space shuttles.

These investigations and audits have led to a number of Federal indictments and convictions. Since January 1987, at least 23 companies or officials of those companies have been convicted of fraud and related charges. One of the most recent guilty pleas came on April 9, 1990, in a Los Angeles court (in the Central District of California) from a manufacturer of aerospace bolts, MacHaffie, Inc. MacHaffie fraudulently sold bolts which had failed required tests. Those bolts, in turn, were used in the engines of some of DOD's most advanced aircraft, including the B-1 bomber, the Navy's F-14 and F-18 aircraft, and the Air Force's F-16 fighter and A-7 II Corsair attack jet.

As of June 30, 1990, total criminal fines and civil penalties and restitution levied against guilty persons exceeded $20 million

THE REQUIREMENT FOR ADDITIONAL STEPS

Given these documented problems and the serious safety problems posed by substandard fasteners, a clear need exists for new producers that will provide greater assurance to the general public and to customers who buy high-strength fasteners that the product purchased is genuine and safe rather than fraudulent and dangerous. There is no need to regulate which fasteners customers use in particular applications; both the government and the private sector have developed detailed guidelines on what bolts to use in various situations. The current need is to ensure that the bolts purchased are not bogus.

Current laws and regulations are not sufficient to achieve this goal. While audits by government purchasers and private customers can detect some substandard fasteners, and while criminal proceedings can punish when fraud is discovered, additional procedures are required to help prevent bad fasteners from being offered for sale in the first place. The Nation needs a way to prevent the sale of bad product and to prevent the related accidents, injuries, deaths, and property damage.

Additional procedures also are needed to help investigators trace the origin of those substandard fasteners which still slip through the system. Traceability is important both to discover who made and sold bad products and to notify other purchasers of these fasteners. It also deters unscrupulous manufacturers, importers, and distributors from faking test reports, since end-users can more easily check on the origin and testing of particular fasteners.

Mr. Bill Colvin, the NASA Inspector General, discussed the importance of traceability in his hearing testimony before the Committee:

> Another major concern included in the audit report was the nontraceability of fastener products in NASA and contractor inventories. Our audit showed that additional procedures and controls were needed to trace fastener products by production lot from the manufacturer to end use in NASA hardware * * *. Without lot traceability, product

> integrity cannot be established because original manufacturer test data cannot be obtained * * *. More important is the inability of NASA and contractors to trace fasteners by lot number and to end use products when problems are detected through alert or problem reporting systems.

Any new procedures to meet these twin goals of prevention and traceability must apply to both the manufacturing stage of the fastener industry and the distribution stage.

First, steps must be taken to ensure that newly-manufactured fasteners are in fact what they claim to be. The best way to ensure this quality is to require that each "lot" (production run) of high-strength bolts is tested by an accredited laboratory and that these test reports are available to customers. Moreover, these requirements should apply equally to domestically manufactured fasteners and to those made overseas.

Second, steps also must be taken to ensure the quality of the product being sold by distributors. The Committee recognizes that most of the Nation's 5,000 distributors are honest and sell only quality product, but the record of the past several years shows that some distributors will substitute deliberately counterfeit fasteners for the genuine product. Requiring testing at the manufacturing stage helps little, if unethical distributors are able to substitute cheap bogus parts during the sales stage.

A requirement that lot identification numbers be placed on containers of fasteners would help deter substitutions, provide customers with greater assurance that containers indeed contain genuine product, and improve traceability in the event a problem develops with a fastener. Even if the end-user commingles fasteners from different lots, a system of strict lot control will provide that customer with much greater assurance than now is available that fake or untested material has not been introduced into the distribution system, and will enable the end-user to check the authenticity of the product before it is put into general inventory.

A system for (1) testing at the manufacturing stage and (2) preserving lot identification at the distribution stage will go a long way toward deterring fraud and improving traceability, which will improve significantly the quality of the high-strength bolts and other fasteners used in this country.

LEGISLATIVE HISTORY

H.R. 3000 was introduced in the House of Representatives on July 25, 1989, by Congressman John Dingell and cosponsored by Congressman Robert Roe. The bill passed the House of Representatives on September 19, 1989.

The Committee held a hearing on H.R. 3000 on November 20, 1989. The Committee heard testimony from the Department of Commerce (DOC), from NASA, and from outside witnesses.

On May 22, 1990, the Committee in open executive session considered a revised version of H.R. 3000 in the form of an amendment in the nature of a substitute. The bill as amended was ordered reported without objection.

SUMMARY OF MAJOR PROVISIONS

The bill as reported includes the following major provisions.

1. Section 3 provides definitions, including the definition of which types of fasteners are covered by the bill's requirements. The bill applies to fasteners which bear grade identification markings and to certain other fasteners which are through-hardened or designated by the Secretary as being used in critical applications.

2. Section 5 requires that both domestically-manufactured and imported grade-marked fasteners be tested by accredited laboratories before the fasteners can be sold.

3. Section 6 requires the Secretary, acting through the NIST Director, to establish a program for accrediting U.S. and foreign laboratories. Within the United States, NIST is to establish both a program of its own to accredit laboratories and an alternative arrangement under which private entities may apply for NIST for approval to accredit laboratories directly. All costs to NIST are fully reimbursable.

4. Section 7 requires distributors who sell these high-strength fasteners to mark boxes of these fasteners in certain cases with the number of each "lot" (production run).

5. Section 9 provides for civil remedies, civil penalties, and criminal penalties.

ESTIMATED COSTS

In accordance with paragraph 11(a) of rule XXVI of the Standing Rules of the Senate and section 403 of the Congressional Budget Act of 1974, the Committee provides the following cost estimate, prepared by the Cogressional Budget Office:

U.S. CONGRESS,
CONGRESSIONAL BUDGET OFFICE,
Washington, DC, May 29, 1990.

Hon. ERNEST F. HOLLINGS,
Chairman, Committee on Commerce, Science, and Transportation, U.S. Senate, Washington, DC.

DEAR MR. CHAIRMAN: The Congressional Budget Office has reviewed H.R. 3000, the Fastener Quality Act, as ordered reported by the Senate Committee on Commerce, Science and Transportation, May 22, 1990. We expect that enactment of this legislation would result in no cost to the federal government or to state or local governments

H.R. 3000 would require that fasteners sold in commerce conform to the standards and specifications that the manufacturer represents they meet. The manufacturer would be required to have a sample of fasteners from each lot tested by an accredited laboratory to determine whether the lot conforms to the standards. The National Institute of Standards and Technology (NIST) would be responsible for the establishment and operation of a laboratory accreditation program. In addition, the act would require NIST to establish a program to record manufacturers' insignias, and would prescribe civil and criminal penalties for the sale of counterfeit fasteners.

The establishment and operation of the accreditation program would not result in additional cost to the federal government because fees sufficient to recover the costs of the program would be charged to the laboratories being accredited. Other provisions of the act are not expected to result in additional costs to the federal government.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contact is Douglas Criscitello, who can be reached at 226-2860.

Sincerely,

ROBERT D. REISCHAUER,
Director.

REGULATORY IMPACT STATEMENT

In accordance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee provides the following evaluation of the regulatory impact of the legislation, as reported.

NUMBER OF PERSONS COVERED

H.R. 3000, as reported, will require that: (1) manufacturers of certain fasteners have a sample of each lot of those fasteners tested by an accredited laboratory to ensure that the fasteners meet stated specifications; and (2) those persons who subsequently sell these fasteners (fastener distributors), in most wholesale situations and in certain retail situations, shall mark conspicuously each container of fasteners with the identification number of the lot of origin, in order to provide the customer with assurance that the fasteners come from a bona fide manufacturer and have been tested.

The fastener-testing provisions of the bill will affect both domestic manufacturers of grade-marked fasteners and those foreign manufacturers who choose to export to the United States. There are an estimated 300 domestic manufacturers of these fasteners and several hundred foreign firms which export fasteners to this country. The bill's provisions regarding subsequent purchases will affect approximately 5,000 U.S. fastener distributors.

ECONOMIC IMPACT

The bill will lead to no increase in Federal expenditures. All costs for NIST laboratory accreditation efforts under the legislation would be fully reimbursable. DOC will have to write regulations and administer a civil fines program, but any additional costs involved will be incidental and likely to be offset by revenues into the General Treasury as a result of fines.

The bill will lead to additional private sector expenditures by both fastener manufacturers and distributors. Manufacturers will be required to have a sample from each lot of fasteners covered by the bill tested by an accredited laboratory. However, in most cases, domestic manufacturers already voluntarily have their fasteners tested, so requiring mandatory testing is not expected to increase costs significantly for manufacturers. The economic impact on fastener distributors will vary, depending on whether the distributor already has a computerized inventory system and whether that dis-

tributor already has the personnel and warehouse space necessary to keep track of individual lots of fasteners. At the Committee's November 20, 1989, hearing, a witness from the National Fastener Distributors Association estimated that on average it will cost a distributor $65,000 per year to comply with the bill, although the cost would be less for those distributors who now offer traceability by lot number. Since the United States has an estimated 5,000 distributors, total annual compliance costs for distributors thus could total $325,000,000 or less each year. The Committee expects, however, that this cost will be more than offset by the savings to the Nation that will result from the prevention of accidents, damage, and repairs associated with substandard and counterfeit fasteners. In addition, the Committee expects that the legislation will lead to the prevention of numerous deaths and injuries.

PRIVACY

This legislation will not have any adverse impact on the personal privacy of individuals affected, except to the degree that manufacturers and distributors will have to disclose information on their products to customers and that laboratories accredited under the bill will be subject to periodic audits. Any such disclosures or audits, however, will be part of voluntary business transactions.

PAPERWORK

The bill will lead to only a minimal increase in paperwork submitted to the Federal Government or generated within Federal agencies. Laboratories that wish to receive NIST accreditation will have to fill out application forms, as will private accreditation entities that wish to receive NIST approval. Federal civil and criminal proceedings under the bill also will result in some additional paperwork.

The bill will require some additional paperwork during private transactions. Manufacturers will be required to keep an original laboratory testing report from an accredited laboratory on file for every lot of fasteners covered by the bill. Each sale by a manufacturer of fasteners covered by the bill will be accompanied by a manufacturer's certificate stating that the fasteners conform to stated specifications. Persons who alter fasteners significantly will be required to submit a written statement to that effect when they sell such fasteners. In many cases, distributors will be required to print lot identification numbers on containers of fasteners.

SECTION-BY-SECTION ANALYSIS

Section 1.—Short title

This section states that the bill may be cited as the "Fastener Quality Act".

Section 2.—Findings and purpose

Subsection (a) states Congressional findings. Among those findings are that the American economy uses billions of fasteners each year; that millions of mismarked, substandard, counterfeit, and other nonconfoming fasteners have been sold in commerce to end-users in the United States, and their use has increased dramatical-

ly the risk of equipment and infrastructure failures; that both the military and civilian sectors of the economy have encountered unnecessary, unwarranted, and dangerous equipment and construction failures, as well as extraordinary expenses, as a result of the use of nonconforming fasteners; that the purchase and use of nonconforming fasteners stem from material misrepresentations about such fasteners made by certain manufacturers, importers, and distributors engaged in commerce; that the lack of traceability by lot number of fasteners sold in commerce is a serious impediment to effective quality control efforts; and that the health and safety of Americans are threatened by the widespread sale in commerce of mismarked, substandard, and counterfeit fasteners, a practice which also harms American manufacturers, importers, and distributors of safe and conforming fasteners, and workers in the American fastener industry.

Subsection (b) states that, in order to protect public safety, to deter the substitution of nonconforming fasteners into commerce, to improve the traceability of fasteners used in critical applications, and generally to provide commercial and governmental customers with greater assurance that fasteners meet stated specifications, it is the purpose of the bill to create procedures regarding the testing, certification, and distribution of certain fasteners used in commerce within the United States.

Section 3.—Definitions

This section sets forth definitions for the bill. Among the definitions, the term "Secretary" refers to the Secretary of Commerce, and the term "Director" refers to the Director of NIST.

Under section 3(5), the term "fastener," as used in the bill, is restricted to (A) a screw, nut, bolt, or stud having internal or external threads, or a load-indicating washer with a nominal diameter of five millimeters or greater or one-quarter inch or greater and which contains any quantity of metal and is held out as meeting a standard or specification which requires through-hardening; (B) a screw, nut, bolt, or stud having external or internal threads which bears a grade identification marking ("grade-mark") required by a standard or specification; (C) a washer to the extent that it is subject to a standard or specification applicable to a screw, nut, bolt, or stud described under subparagraph (B); or (D) any items within a category added by the Secretary in accordance with section 4(b). The term "fastener" does not include any screw, nut, bolt, or stud that is produced and marked as ASTM A 307 Grade A.

The Committee's intention is that all fasteners carrying grade identification markings (except those exempted under section 4 of the bill) be covered by the bill's requirements. This would include any new types of fasteners for which grade identification markings are promulgated after the date of enactment of this legislation. The requirement under subparagraph (A) is intended to cover socket cap and set screws and similar fasteners which are through-hardened but which do not carry grade marks because they lack a convenient location to place such grade marks.

Under section 3(15), the bill defines the term "through-harden" as heating above the transformation temperature followed by quenching and tempering. This definition is intended to cover only

through-hardening and does not include fasteners which are only surface-hardened or case-hardened. The term also includes fasteners which are purported to be through-hardened but are not. Any lot of fasteners whose manufacturer purports that it is through-hardened must be tested; if the tests show that the samples were not successfully through-hardened, that lot of fasteners should be rejected and not sold in commerce.

Subparagraph (C) of section 3(5), which defines "fastener," is intended to cover those washers which standards indicate are associated with particular fasteners and must be used in order for those fasteners to conform to those standards. A washer whose use with a particular fastener is permitted but not required is not covered by this definition.

The Committee has excluded ASTM A 307 Grade A fasteners because, while they carry a grade mark, they are relatively low-strength fasteners used in non-critical applications. To qualify for the exemption, the fastener must be produced to the A 307A standard and must be stamped with either the term "A 307A" or the grade markings specified for this category of fastener. The Committee also does intend to include ASTM A 307 Grade B fasteners under the requirements of the bill because these fasteners have specialized engineering uses in power plants and other important applications and must be produced to the required specifications as a matter of safety and economic necessity.

The Committee intends that the term "fastener", and therefore the requirements which the bill applies to fasteners, refer only to fasteners themselves and not to components or products which may contain fasteners. In other words, once a fastener has been incorporated into a product, it is no longer a fastener for the purposes of this legislation. For example, if a components manufacturer incorporates fasteners into a product and sells that product to a customer, the fasteners in that product are not subject to the lot identification and commingling requirements set forth in section 7 of this bill. Similarly, fasteners which are included in a component or product which is imported into the United States are not subject to the bill's testing and certification requirements. However, fasteners which have been incorporated into components and which carry performance and manufacturers' marks should meet the applicable specifications which their marks imply.

The term "grade identification marking", under section 3(6), means any symbol appearing on a fastener purporting to indicate that the fastener's base material, strength properties, or performance capabilities conform to a specific standard of a consensus standards organization or other person. This paragraph contains the phrase "or other person" because it is possible that, in some cases, government agencies or major end-users will devise grade identification markings.

Under section 3(10), the term "manufacturer" means a person who fabricates fasteners, or who alters any item so that it becomes a fastener. The latter part of this definition is intended to cover persons such as those who purchase so-called "green bolts" which are not through-hardened and then alter them by putting them through a process of through-hardening.

Section 4.—Special rules for fasteners

Subsection (a) states that, if the Secretary determines that any category of fastener (as defined under section 3) is not used in critical applications, the Secretary shall waive the requirements of the bill with respect to such category.

Subsection (b) states that, if the Secretary determines that a category of item which (1) is a screw, nut, bolt, or stud not described under the provisions of section 3(5)(A)(i) or (B), or (2) is associated with a fastener (as defined in section 3), or (3) serves a function comparable to that served by a fastener so described, and is used in critical applications, the Secretary may include such category within the definition of fasteners under this bill.

The Committee has included subsection (b) because it is possible that an item which is not already covered under the definition of fastener in section 3 nonetheless may play an important role in critical applications and thus should be brought under the bill's requirements. For example, the Secretary may wish to consider adding high-strength aluminum, titanium alloy, and certain stainless steel alloy fasteners which are strengthened by a heat treatment process called solution treating followed by aging. Small unmarked fasteners that are used in critical applications also may need to be included under the definition. In addition, the Secretary may wish to consider adding retaining rings to the list of items included in the term "fastener."

Subsection (c) requires that the Secretary shall provide advance notice and the opportunity for public comment prior to making any determination under subsections (a) and (b).

Section 5.—Testing and certification of fasteners

Subsection (a) sets forth the requirement that no fastener (that is, no fastener of the type covered in the definition in section 3) shall be offered for sale or sold in commerce unless it is part of a "lot" (production run) which conforms to the standards and specifications to which the manufacturer represents it has been manufactured, and has been inspected, tested, and certified as provided in this section.

This subsection also provides an emergency order exception under which a lot of 50 fasteners or less may be shipped to a customer without inspection, testing, and certification if, within 10 working days of the delivery or as soon as practicable thereafter, the inspection, testing, and certification are carried out, and written notice is sent to all purchasers of the fasteners (except for retail sellers and retail consumers, unless such retail sellers and retail consumers request such written notice in advance), detailing the results of such inspection, testing, and certification. If a fastener is sold as allowed under this subsection, each purchaser of such fastener shall be provided with written notice with each sale and delivery stating that such fastener has not yet been inspected, tested, and certified as required by the bill.

In providing that no fastener shall be offered or sold in commerce unless it has been inspected, tested, and certified, the Committee intends to include fasteners procured by Federal, State,

local, and other government agencies as well as those sold to private persons.

Subsection (b) deals with inspection and testing. Under paragraph (1), the manufacturer of a lot shall cause to be inspected and tested a representative sample of the fasteners in such lot to determine whether the lot conforms to the standards and specifications to which the manufacturer represents it has been manufactured. Such inspection and testing shall be performed by a laboratory accredited as provided under this Act. The standards and specifications to which the manufacturer represents such lot has been manufactured shall be disclosed by the manufacturer to the laboratory at the time the lot is submitted for inspection and testing under this paragraph. The manufacturer of a lot may perform the inspection and testing required by paragraph (1) in a laboratory which it owns or with which it is otherwise affiliated, if such laboratory is accredited as provided under the bill.

Under paragraph (2), the size, selection, and integrity of the sample to be inspected and tested shall be governed by the standards and specifications to which the manufacturer represents the fasteners in the sample have been manufactured, or, if such standards and specifications do not provide for the size, selection, or integrity of the sample, by sampling procedures prescribed by the Secretary, who to the extent practicable shall use consensus standards and related materials. Nothing in this subsection shall prohibit a purchaser from requiring the inspection and testing of a greater number of fasteners from a lot than is specified in the applicable standards and specifications or in the applicable sample plan.

The Committee intends that the sample plan for each type of fastener be appropriate to that particular fastener. The Committee does not intend that there be a single sample plan that will be applied to the testing of all fasteners.

Under subsection (c), if a laboratory performing the inspection and testing determines, based on characteristics selected by the Secretary for testing and based on the sample examined, that a lot conforms to the standards and specifications to which the manufacturer represents it has been manufactured, the laboratory shall provide to the manufacturer a written inspection and testing report with respect to such lot, in a form to be prescribed by the Secretary by regulation and including details regarding the fasteners, the characteristics tested for, and whether the sample conforms to the stated standards and specifications.

The Committee intends that, in those situations where the sample does not conform to the stated standards and specifications, the Secretary's regulations shall provide for the laboratory to notify the manufacturer of this fact, and that the manufacturer shall take steps to keep fasteners from that particular lot from being sold as if they do meet the stated standards and specifications.

The Committee also urges that the Secretary require laboratory testing reports to be written or printed on water-marked paper or some similar step to be taken to inhibit and deter efforts to counterfeit or duplicate fraudulently laboratory inspection and testing reports.

The Committee notes that, in the past, some unscrupulous distributors have bought surplus fasteners, replated them to make them appear new, and then tried to sell them as if they were new product. This problem has been particularly serious in the case of fasteners which the Federal Government has sold as surplus.

It is possible that fasteners manufactured after the date of enactment of this legislation and which are later declared surplus could be retested and recertified under the provisions of this legislation, but only if lot integrity has been preserved. If lot integrity is not preserved, surplus fasteners cannot be tested and sold as certified product.

The Committee notes, however, that no reliable way exists to test and certify surplus fasteners that were manufactured before the date of enactment of this legislation, since in most cases no one can identify the lot from which a sample has come. These surplus fasteners cannot be tested and certified under the provisions of this bill and may not be sold as certified product.

The Committee directs the Secretary, through the Director and in consultation with such other Federal officials as the Secretary may determine appropriate, to submit to the Committee by December 31, 1990, a report on what steps can be taken to minimize the risks of surplus fasteners being sold fraudulently as new. In particular, the report should discuss options for marking surplus fasteners or otherwise taking steps to ensure that any person buying these fasteners from a distributor will know that the fasteners are not new product.

Section 6.—Laboratory accreditation

Subsection (a) states that, within 180 days, after the date of enactment of this Act, the Secretary, acting through the Director, shall issue regulations which shall include—

(A) procedures and conditions for the accreditation by NIST of those laboratories engaged in the inspection and testing of fasteners under section 5;

(B) procedures and conditions (which shall be consistent with the procedures and conditions established under subparagraph (A)), using to the extent practicable the requirements of national or international consensus documents intended to govern the operation of accreditation bodies, under which private entities may apply for approval by the Secretary to engage directly in the accreditation of laboratories in accordance with the requirements of the bill; and

(C) conditions (which shall be consistent with those established under subparagraph (A)) under which the accreditation of foreign laboratories by their governments or organizations recognized by the Director shall be deemed to satisfy the laboratory accreditation requirements of the bill.

No accreditation provided under the terms of this subsection shall be effective for a period of greater than three years.

Subsection (b) states that existing NIST accreditation procedures in part 7 of title 15, CFR, as in effect on the date of the enactment of this bill and supplemented as the Secretary considers necessary, shall be used to accredit laboratories under the accreditation program established under subsection (a).

Under subsection (c), the Secretary shall ensure that private entities accrediting laboratories comply with applicable conditions, and that laboratories accredited by such private entities or by foreign governments comply with the requirements for such accreditation. The Secretary may require any such private entity or laboratory to provide all records and materials that may be necessary to allow the Secretary to carry out this subsection.

Subsection (d) states that the Director may hire such contrctors as are necessary to carry out the accreditation program established under subsection (a). Costs to NIST and to the Secretary for the establishment and operation of the accreditation program under this section shall be fully reimbursable to NIST or to the Secretary, as appropriate, through fees or other charges for accreditation services under such program.

Subsection (e) states that the Director shall transmit periodically to appropriate consensus standards organizations any information or recommendations that may be useful in the establishment or application by such organizations of standards or specifications for fasteners.

In the Committee's view the purpose of establishing a laboratory accreditation program is to assure a consistent level of quality in laboratories testing fasteners, and to prevent fastener counterfeiters from using bogus laboratories and fake testing reports.

Laboratory accreditation by private entities can be accepted, provided that their accreditation process meets the same conditions as NIST's in-house laboratory accreditation program. Any such private entity should follow thorough, recognized standards of accreditation, and be free of financial or structural conflicts of interest in granting an accreditation.

The bill directs the Secretary to establish conditions under which foreign laboratories may be accredited. The Committee wants to ensure that the laboratory accreditation process does not become a barrier to legitimate imports of foreign-made fasteners. The Committee stresses, however, that foreign laboratories should meet the same standards as U.S. laboratories. This step is necessary to assure the customer that the fasteners have been tested properly and do in fact meet stated specifications.

In the event that a particular country does not have an acceptable laboratory accreditation system in place at a particular time, the bill provides a mechanism under section 7(c) by which an importer or private label distributor may bring a lot or portion thereof of untested fasteners into the United States, providing, among other requirements, that the importer or private distributor assumes the responsibility in writing for the inspection and testing of such lot or portion of fasteners. The Committee has included this provision to make trade possible even with countries which do not at a given time have an acceptable laboratory accreditation process. Because of section 7(c), there is no reason why trade considerations should ever lead the Secretary or Director to consider lowering accreditation standards for laboratories in a foreign country.

Section 7.—Sale of fasteners subsequent to manufacture

Subsection (a) states that it shall be unlawful for a manufacturer to sell any container of fasteners (as fasteners are defined in sec-

tion 3 of this Act) which are manufactured in the United States without a written certificate by the manufacturer certifying (1) that the fasteners have been manufactured according to the requirements of the applicable standard or specifications, meet all requirements, and have been inspected and tested by a laboratory accredited as provided by this Act, and (2) that an original laboratory testing report is on file with the manufacturer, or under such custody as may be prescribed by the Secretary, and available for inspection.

In order to reduce paperwork, the Committee intends that a manufacturer need provide only one manufacturer's certificate per shipment, even if that shipment contains fasteners from more than one lot. Moreover, the certificate need not be a separate piece of paper; it may be included as part of the shipment's invoice. However, the certificate is to provide brief information on each lot or portion thereof included in the shipment as well as the location where the customer can see an origianl laboratory testing report for each lot or portion thereof included in the shipment.

By the term "original laboratory testing report," the Committee means a signed original report from the testing laboratory and not a photocopy or other type of copy. Photocopies can be altered and faked and are therefore not acceptable for the purposes of this section.

Subsection (b) deals with fasteners of foreign origin. Paragraph (1) provides that, except as provided in paragraph (2), it shall be unlawful for any person to sell to any importer, and for any importer to purchase, any shipment of fasteners which are manufactured outside the United States unless delivery of such shipment to such importer is accompanied by a manufacturer's certificate and an original laboratory testing report provided by an accredited laboratory with respect to the lot from which such fasteners were taken and with any other relevant lot identification information.

The Committee has required that an original laboratory testing report, as well as the manufacturer's certificate, accompany each lot or portion thereof of foreign-made fasteners imported into the United States in order to ensure that an original laboratory testing report is available within the United States and accessible both to interested customers and to the legal discovery process.

Paragraph (2) of subsection (b) states that the requirement under paragraph (1) that the delivery of such a shipment to such importer be accompanied by an original laboratory testing report shall not apply in the case of fasteners imported into the United States either (A) as products manufactured within a nation which is party to a congressionally-approved free trade agreement with the United States that is in effect, so long as the Secretary certifies that satisfactory arrangements have been reached by which purchasers within the United States can access readily an original laboratory testing report for such fasteners, or (B) as Canadian-origin products under the United States-Canada Automobile Pact for uses as original equipment in the manufacture of motor vehicles.

The Committee notes that the United States has entered into formal free trade agreements with Canada and Israel and may in the future enter into similar agreements with other nations. While it is the Committee's understanding that the free trade agreements

between Canada and Israel and the United States do not strictly require that any fastener manufacturers in these countries be exempt from the requirement that each lot exported to the United States be accompanied by an original laboratory testing report, the Committee does believe that such an exemption is consistent with the basic principles set forth in these agreements. Therefore, fasteners which are made in these countries may be exported to the United States without an original laboratory testing report for each lot or portion thereof included with each shipment, so long as the Secretary certifies that satisfactory arrangements have been reached by which purchasers within the United States can gain access readily to an original report for such fasteners.

This provision does not exempt fastener manufacturers in countries with which the United States has free trade agreements from the requirements to have fasteners tested by accredited laboratories and to include a written manufacturer's certificate with each shipment of fasteners exported to the United States. Nor does the exemption apply to fasteners manufactured in a third country and re-exported to the United States. Any third-party fasteners are subject to the full requirements set forth in paragraph (1) of subsection (b).

The Committee intends to grant a full exemption form the requirement that exports be accompanied by original laboratory testing reports for fasteners which enter the United States as Canadian-origin products under the United States-Canada Automobile Pact for use as original equipment in the manufacture of motor vehicles. Formally known as the Agreement Concerning Automobile Products (Jan. 16, 1965, 17 U.S.T. 1372, T.I.A.S. No. 6093), the Automobile Pact is a formal bilateral agreement which created a North American common market for motor vehicles and original equipment parts. The Committee has made this exemption for Canadian automobile fastener manufacturers with the understanding that these companies will keep original laboratory testing reports on file and make them accessible upon request to U.S. customers. Furthermore, the exemption from the requirement that each exported shipment be accompanied by relevant original laboratory testing reports does not exempt Canadian manufacturers of automobile fasteners from the bill's requirements to have fasteners tested by accredited laboratories and to send a manufacturers' certificate with each shipment.

Subsection (c) provides an option for importers and private label distributors. Delivery of a lot or portion thereof may be made to an importer or private label distributor without the required original laboratory testing report if the manufacturer provides to the importer or private label distributor a manufacturer's certificate certifying that the fasteners have been manufactured according to the requirements of the applicable standard or specification and meet all applicable requirements, and if the importer or private lable distributor assumes responsibility in writing for the inspection and testing of such lot or portion by a laboratory accredited as provided in the bill. If the importer or private distributor assumes the responsibility in writing for the inspection and testing of such lot or portion, the importer or private label distributor shall provide to an accredited laboratory the manufacturer's written disclosure.

The Committee has provided this option in art to make it possible to import fasteners from countries which do not yet have laboratory accreditation procedures recognized by the Director and in part to give additional flexibility for American importers and private distributors who may wish to conduct the required testing themselves. The Committee is very aware, however, of the potential for an unscrupulous importer to bring untested product into the United States and then try to evade proper testing of the full shipment. For that reason, subsection (c) requires that the importer or private distributor assume that responsibility in writing. The Committee intends that written statements be considered "records" as that term is used in section 9 of this bill. The Committee also intends that any such written statement include not only the relevant lot numbers and date of importation but also the number of fasteners included in each lot brought in with each shipment.

Subsection (d) covers alterations subsequent to manufacture. Any person who significantly alters a fastener so that such fastener no longer conforms to the description in the relevant certificate issued under section 5(c), and who thereafter offers for sale or sells such altered fastener, shall be deemed a manufacturer for purposes of this Act and shall cause such altered fastener to be inspected and tested as though it were newly manufactured, unless delivery of such fastener to the purchaser is accompanied by a written statement noting the original lot number, disclosing the subsequent alteration, and warning that such alteration may affect the dimensional or physical characteristics of the fastener. Any person who sells an altered fastener and who did not alter such fastener shall provide to the purchaser a copy of such written statement.

By the term "significantly alters," the Committee refers to an action which weakens or otherwise materially affects the performance or capabilities of the fastener as it was originally manufactured and tested. For example, machining would significantly alter a fastener if it results in a loss or modification of the required physical properties of the original fastener specification to which a fastener is produced. An alteration which does not affect performance should not be considered significant. For example, cutting studs from a tested and certified rod should not be considered a significant alteration unless the stud has physical or chemical properties sufficiently different from those of the original rod to affect performance or reduce compliance with the stated specification.

The Committee encourages the Secretary to consider requiring two steps when a fastener is significantly altered: an alteror's identification mark on the fastener and a new lot number which will be marked on the containers (per the requirements of subsection (f), as discussed below) and referenced in the laboratory testing report.

Subsection (e) states that it shall be unlawful for any manufacturer or any person who purchases any quantity of fasteners for resale at wholesale to commingle like fasteners from different lots in the same container, except that this requirement shall not apply to sales by original equipment manufacturers to their authorized dealers for use in assembling or servicing products produced by the original equipment manufacturer.

The Committee believes that this prohibition on commingling at the manufacturing and wholesale levels improves traceability and

provides greater assurance to subsequent purchasers that untested and counterfeit fasteners have not been mixed with legitimate product.

The Committee recognizes that some fasteners are sold in kits, such as a nut, bolt, and washer together, and are intended to be used as a unit. The Committee does not wish to prohibit or hinder this practice, but neither does it intend to create a loophole to the rule concerning commingling. Therefore, unlike fasteners may be commingled in the same package or container if they are truly intended to be used as a unit. Commingling of different fasteners with the intent to evade the spirit of this section is strictly prohibited.

Subsection (f) covers subsequent purchasers, including wholesalers and retailers. It shall be unlawful for any person to sell any quantity of fasteners to any person who purchases such fasteners (1) for sale at wholesale, or (2) for assembling components of a product or structure for sale, unless the container is conspicuously marked with the number of the lot from which such fasteners were taken, except that this requirement shall not apply to sales by original equipment manufacturers (OEMs) to their authorized dealers for use in assembling or servicing products produced by the original equipment manufacturer. In addition, containers of fasteners being bought for other purposes shall be marked with lot numbers if customers so request, either prior to or at the time of sale.

The Committee intends that, at the retail level, the lot identification requirement be limited to containers of fasteners that will be used to make components for products or structures that will be sold to government, industry, or other customers. Fasteners sold at the retail level for the purpose of maintenance, repair, or the customer's personal use are exempt from the lot identification requirement, unless the retail customer requests such lot identification. Bolts used purely to decorate an existing product also are exempt.

Each container of fasteners for sale at wholesale and containers of fasteners sold at retail for the purpose of assembling components of a product or structure for sale shall be conspicuously marked with the number of the lot from which it came. This number should be the original lot number specified by the manufacturer, unless the person selling the fasteners believes that similar numbers by different manufacturers will cause confusion. In that case, the importer, wholesaler, or retail seller is free to use his or her own inventory or purchase identification numbers, provided that the number on each container of fasteners is readily traceable back to the manufacturer's original lot identification number.

Sales by OEMs to their authorized dealers for use in assembling or servicing products produced by the original equipment manufacturer are exempt from the requirements of subsection (f). Examples of this situation would be parts sold to authorized dealers by such companies as General Motors and Caterpillar. Since a specific part number is normally associated with each type of fastener in this situation, and since the sales are entirely within the corporate umbrella formed by the OEM and its authorized dealers, there is little danger of product substitution. If an OEM sells fasteners to a person other than an authorized dealer, the requirements of this subsection do apply. Similarly, if an authorized dealer makes a

retail sale of OEM-manufactured fasteners for use with a product not manufactured by that OEM, then the subsection's requirements regarding marking the container with the lot number do apply.

The Committee is aware that in some cases an OEM's authorized dealer will be asked to sell individual fasteners to repair shops or others for the purpose of repairing or performing maintenance on a vehicle or product manufactured by that OEM. For example, a service station may ask an automobile dealer for certain parts, including possible fasteners. In this case, lot identification numbers are not required on the fastener containers. Servicing a vehicle or device is not the same as assembling components of a product or structure for sale and is therefore exempt from the lot identification requirement.

Subsection (g) states that the Secretary may issue such regulations as may be necessary to ensure compliance with the provisions of this section.

Section 8.—Manufacturers' insignias

Subsection (a) states that no fastener which is required by the standards and specifications to which it was manufactured to bear a raised or depressed insignia identifying its manufacturer or private label distributor shall be offered for sale or sold in commerce unless the manufacturer or private label distributor of such fastener has complied with the requirements as prescribed by the Secretary pursuant to subsection (b) requiring that grade identification markings and the insignias of manufacturers and private label distributors are recorded, so as to ensure the traceability of a fastener to its manufacturer or private label distributor.

Subsection (b) deals with recordation. The Secretary shall establish, by regulation, a system for the recordation of the insignias of manufacturers and private label distributors described in subsection (a) of this section, to ensure the traceability of a fastener to its manufacturer or private label distributor.

The Committee urges the Secretary to encourage and, if appropriate, require through regulation that manufacturers use raised insignias ("headmarks") on the fasteners subject to this bill's requirements. With raised insignias, it is harder for a counterfeiter to alter a bolt to look like a legitimate manufacturer's product.

In the event that two or more companies want to use a particular insignia, the Committee urges the Secretary to give priority to the company which historically has used that insignia the longest.

Section 9.—Remedies and penalties

Subsection (a) provides for civil remedies. The Attorney General may bring an action in an appropriate U.S. district court for appropriate declaratory and injunctive relief against any person who violates the bill. Any such action may not be brought more than 10 years after the date on which the cause of action accrues.

Subsection (b) states that any person found by the Secretary to have violated any provision of the bill or regulations pursuant to the bill shall be liable for a civil penalty of not more than $25,000 for each violation. In determining the amount of the penalty, the Secretary shall consider the nature of the violation and other fac-

tors. The Secretary may compromise, modify, or remit, with or without conditions, any such civil penalty. A civil penalty assessed under this subsection may be recovered in an action brought by the Attorney General.

The Committee has included this civil penalties provision in the bill because some violations may be too small in terms of the dollar value of the fasteners to warrant a full civil or criminal action in the courts but nonetheless may have major public safety implications if those fasteners are substandard. The Committee intends that this provision be implemented at the level of the Secretary and not the Director. The Committee believes that NIST's role should continue to be limited to research, technical services, and, as in the case of this bill, laboratory accreditation.

The Committee directs the Secretary to submit to the Committee by December 31, 1990, a report on options for strengthening the enforcement of the bill's requirements. The options reviewed should include a possible expansion of the role of Federal customs, regulatory, and investigations agencies and the possibility of creating a privately-funded whistleblowers fund to support investigations.

Subsection (c) provides for criminal penalties. Whoever knowingly certifies, marks, offers for sale, or sells a fastener in violation of this bill shall be fined under title 18, U.S.C., or imprisoned not more than five years, or both. Whoever intentionally fails to maintain records relating to a fastener in violation of this legislation shall be fined under title 18, U.S.C., or imprisoned not more than five years, or both. Whoever negligently fails to maintain records relating to a fastener in violation of this Act shall be fined under title 18, U.S.C., or imprisoned not more than two years, or both.

By the term "maintain records," the Committee means that the persons covered by this legislation should maintain full and accurate records in accordance with the provisions of the bill. Maintaining incomplete, inaccurate, or falsified records would be a violation of the legislation.

Section 10.—Recordkeeping requirements

Subsection (a) states that laboratories which perform inspections and testing under this legislation shall retain for 10 years all records concerning the testing and certification of fasteners under section 5. Under subsection (b), manufacturers, importers, private label distributors, and persons who make significant alterations to fasteners shall retain for 10 years all records concerning the testing and certification of fasteners under section 5, and shall provide copies of any such laboratory testing report or manufacturer's certificate upon request to any subsequent purchaser of fasteners taken from the lot to which such laboratory testing report or manufacturer's certificate relates.

The Committee intends that the fees charged to provide copies of laboratory testing reports of manufacturer's certificates shall be fair and reasonable.

Section 11.—Relationship to State laws

This section provides that nothing in this legislation shall be construed to preempt any rights of courses of action that any buyer may have with respect to any seller of fasteners under the law of

any State, except to the extent that the provisions of this legislation are in conflict with such State law.

Section 12.—Construction

This section states that nothing in the bill shall be construed to limit or otherwise affect the authority of any consensus standards organization to establish, modify, or withdraw any standards and specifications under any other law or authority in effect on the date of the enactment of this bill.

Section 13.—Regulations

This section requires the Secretary, within 180 days after the date of enactment, to issue such regulations as may be necessary to implement this legislation.

Section 14.—Advisory committee

Section 14 requires that, within 90 days of the date of enactment, the Secretary shall appoint and advisory committee consisting of representatives of fastener manufacturers, importers, distributors, end-users, independent laboratories, and standards organizations. The Secretary and Director shall consult with the advisory committee prior to promulgating any regulations under this legistlation, and in such other matters related to fasteners as the Secretary may determine.

The Committee is aware that the fastener industry is complex and consists of a number of different types of companies. As a result, the Committee believes that an advisory committee should be created in order to provide additional representation for various segments of the industry and to provide the Secretary and Director with an additional source of information and advice. The Committee believes that, whenever practicable, the Secretary should select advisory committee members who represent associations and coalitions rather than simply individual companies.

Section 15.—Applicability

The requirements of the bill shall be applicable only to fasteners fabricated 180 days or more after the Secretary issues final regulations required under sections 5, 6, and 8, except that the Secretary may extend such time period if the Secretary determines that an insufficient number of laboratories have been accredited to perform the volume of inspection and testing required. Upon any such extension, and every six months thereafter during such extension, the Secretary shall submit a report to Congress explaining the reasons for such extension and the steps being taken to ensure the accreditation of a sufficient number of laboratories.

In accordance with this section, the Committee does not intend that fasteners manufactured before the applicable date of the provisions of the bill shall be subject to the requirements of the bill.

CHANGES IN EXISTING LAW

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, the Committee states that the bill as reported would make no change to existing law.

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